

REMARKS

This amendment is submitted in an earnest effort to bring this application to issue without delay.

Applicants note that the International Filing Date of PCT/EP 2002/010357 is 16 September 2002, that the instant application is the US National Phase of the PCT Application, and that pursuant to the International Convention Applicants have the right to the benefit of the International Filing Date. Applicants have amended the CROSS REFERENCE TO RELATED APPLICATIONS to delete a claim to the priority of the International Application since such a claim is unnecessary.

Applicants have amended claims 1 through 14, and submitted new claims 15 and 16. Antecedent basis for the amendment to claim 1, step (e) and for new claim 15 may be found in the specification on page 10, at the bottom, through page 13, line 8. Antecedent basis for the amendments to claim 1, step (f) may be found in the specification on page 2, lines 3 through 9. Antecedent basis for new claim 16 may be found in the specification on page 8, bottom paragraph. Thus claims 1 through 16 are now in this application and are presented for examination.

Applicants have responded to the objections to the claims set forth by the Examiner on page 2 of the official action by amending the claims according to the Examiner's suggestions.

Applicants have responded to the Examiner's rejection of the claims under 35 USC 112, second paragraph, by amending claim 1 to no longer include a broad range, followed by a narrow range as

discussed in the paragraph bridging pp 3 and 4 of the office action. Applicants have also deleted the expression "and the like" and the use of "i.e." from claim 11 as requested by the Examiner. Applicants have amended claims 1, 10 and 11 to delete use of the definite article "the" preceding a claim limitation where there is no prior recitation in the claim of the particular limitation. These changes are believed for the most part to overcome the bases for rejection of the claims under 35 USC 112.

Applicants have taken note of the Examiner's rejection of claims 1 through 14 as last presented under 35 USC 112, second paragraph, as set forth in the first paragraph on page 3 of the office action. Here the Examiner has questioned what are the relevant cell parameters to be measured by the presently claimed method. Applicants point out that they have not invented the use of cell cultures to study the effect of diseases or drugs for treating diseases on organisms, especially animals and humans. As evidenced by US Patent 5,424,209 to KEARNEY it is known in the art to determine a number of cell culture parameters as an indication of how a particular disease or how a particular drug for treating a disease affects the cells. For instance "growth and metabolic characteristics" of the cells are a relevant parameter according to col. 20, line 20 of the reference. Determining the toxic, mutational, and cancer causing potentials of various liquid, solid, or gaseous materials could also be a relevant parameter as disclosed in the reference. See col. 20, lines 36 to 39. Applicants' invention is not the discovery of the measurement of a

new parameter to be measured in a tissue culture. These parameters are well known to those "skilled in the art" and one skilled in the art would know what is meant by "all relevant cell culture parameters." Applicants' invention is a new method to better any number of parameters, well known to those skilled in the art, relevant to tissue cultures. As such Applicants should not be required to limit their presently claimed method to the measurement of any one particular tissue culture parameter.

Nonetheless in order to more sharply focus in on the field in which Applicants' presently claimed method is especially relevant, Applicants have amended claim 1, step (f) to define some of the fields in which the present method may be used, for instance in the studies of inflammation, cancer, AIDS. These fields are disclosed in the present application on page 2. In addition Applicants are now submitting new claim 16 that mentions some parameters, namely, pH values, lactate values or electrical potentials. These parameters are disclosed in the specification at the bottom of page 8.

In view of the above, Applicants maintain that no rejection of any claim now presented should be set forth under 35 USC 112, second paragraph.

The Examiner has rejected claims 1 through 8 and 11 through 14 as originally presented as anticipated under 35 USC 102 citing KEARNEY (A). Applicants believe that no such rejection should be maintained against any claim now presented as anticipated under 35 USC 102 or as obvious under 35 USC 103 in view of this reference.

The method of claim 1 as now presented is both novel and unobvious when compared to the disclosure in KEARNEY, because not all of the characteristics contained in claim 1 as now presented are disclosed or even suggested in the reference. Especially KEARNEY does not disclose or suggest a permanent microscopic monitoring, whereby at least one camera with an attached microscope set on a drivable table approaches certain selected positions, whereby the positions are pre programmed by software. See claim 1, step (e) as now presented and new claim 15.

The problem underlying the invention is to develop a method for the cultivation of cells, where it is possible to find, monitor and gather certain selected cells during the length of an experiment or a cultivation period.

This problem is solved with the invention according to the new claim 1. The presently claimed invention is not obvious from the known state of the art. KEARNEY states briefly (column 20, line 27) that in a cell culture system as described therein, a "microscope/CCD-camera system" can be used. The reference, however, does not give a hint, of the advantage of using a camera with an

attached microscopic device whereby the camera is mounted on a drivable table and goes to pre selected positions (claim 1 as now presented) and whereby and especially where the coordinates (contours) of the positions are saved with the help of software (claim 15). The presently claimed method has the big advantage that certain pre selected positions (e.g. certain cells that are to be monitored) are saved and these positions are approached several times during cultivation or during the experiment. Thus it is possible to monitor and record reactions or changes of certain cells during the cultivation.

In view of the above, no claim now presented should be rejected as anticipated or as obvious in view of KEARNEY. Furthermore new claim 15 is especially believe to be patentable over KEARNEY for the reasons set forth in the preceding paragraph.

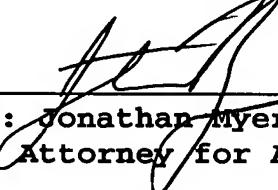
The dependent claims 2-14 and 16 regard preferential and advantageous embodiments of the method defined in claim 1 according to the invention. Because claims 2 through 14 and 16 are (at least) dependent on claim 1, they are also patentable. Applicants especially believe that new claim 15 is inventive compared to KEARNEY because KEARNEY does not give any clues, that certain contour outlines (e.g. certain sections in a cell culture) may be saved using computer software and that these contours are recognized when the camera revisits the same location later on in the experiment.

Applicants note that the Examiner has also rejected all claims last presented as obvious under 35 USC 103 citing KEARNEY in combination with PFALLER. Applicants find no suggestion of the presently claimed invention in the PFALLER reference per se or in combination with KEARNEY. The PFALLER reference seems to be particularly relevant to claims 9 and 10 as originally presented before the Applicants' amendment of independent claim 1. The Examiner appears to cite PFALLER as a basis for the obviousness of Applicants' claim 9, originally presented, providing a cell culture chamber separated into two compartments by a semi-permeable membrane with different cell culture types on either side of the membrane, where cultivation of the two cell culture types takes place. The Examiner also argues that PFALLER discloses introducing different media into each of the compartments.

Applicants believe that in view of the amendments to independent claim 1 focussing in on step (e) of the present method with the camera employing a microscope lens and mounted on a displaceable table, thereby allowing Applicants to move the camera and especially focussing on claim 15 to obtain specific culture contours at a given time and then later on in the method revisiting the same location to obtain an undated version of the cell contours, the combination of KEARNEY and PFALLER provides no basis to reject any claim now presented as obvious under 35 USC 103.

Applicants believe that all claims now presented are in condition for allowance and a response to that effect is earnestly solicited. Applicants enclose a petition to obtain a one month extension of the term for response (small entity) and submit Form PTO 2038 to enable the cost of obtaining the extension to be charged to the credit card of the undersigned attorneys.

Respectfully submitted,
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Enclosure:

Request for extension (one month)

PTO 2038 Charge Form